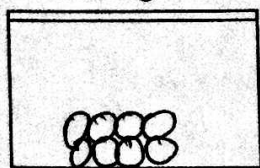
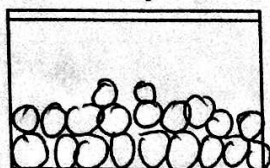


STATES OF MATTER

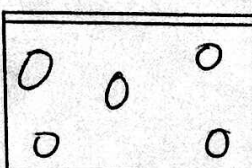
1. Draw a diagram to represent 8 particles in each state of matter. (HINT: Recall that plasma is gas-like but with one major difference.)



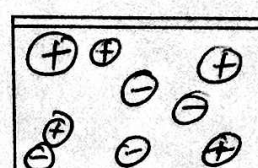
SOLID



LIQUID



GAS



PLASMA

CLASSIFICATION OF MATTER

Classify the following as element (E), compound (C), heterogeneous mixture (Ht), or Homogenous (Hm)

- | | | | |
|-----------------|-----------|--------------------------------------|-----------|
| 2. hydrogen gas | <u>E</u> | 4. air | <u>Hm</u> |
| 3. orange juice | <u>Ht</u> | 5. carbon dioxide (CO ₂) | <u>C</u> |
6. Compare and contrast a *mixture* and a *compound*. How are they alike/different?

7. Compare and contrast a *Homogeneous* and *Heterogeneous mixture*. How are they alike/different?

Classify as solution, colloid, or suspension. *If it is a solution identify the solute and the solvent.*

- | | | | |
|-------------------|----------------|-------------------------|-----------------|
| 8. smoke | <u>COLLOID</u> | 12. Chicken Noodle Soup | <u>SUSP</u> |
| 9. paint | <u>COLLOID</u> | 13. Kool-Aid | <u>SOLUTION</u> |
| 10. tap water | <u>SOLN</u> | 14. Milk | <u>COLLOID</u> |
| 11. whipped cream | <u>COLLOID</u> | 15. Black Coffee | <u>SOLUTION</u> |

PROPERTIES & CHANGES IN MATTER

Classify the following properties of matter as chemical (C) or physical (P).

- | | | | |
|-------------------|----------|--------------------|----------|
| 16. flexible | <u>P</u> | 19. boils at 20°C | <u>P</u> |
| 17. Heat Released | <u>C</u> | 20. Bubbles | <u>C</u> |
| 18. Color Change | <u>C</u> | 21. low reactivity | <u>C</u> |

Classify the following as chemical changes (C) or physical changes (P).

- | | | | |
|--------------------------|----------|--|----------|
| 22. grapes fermenting | <u>C</u> | 29. Curds forming in milk | <u>C</u> |
| 23. copper melting | <u>P</u> | 30. Cracking open an egg | <u>P</u> |
| 24. recycling aluminum | <u>P</u> | 31. Carmelizing sugar | <u>C</u> |
| 25. gasoline exploding | <u>C</u> | 32. H ₂ SO ₄ + Sugar | <u>C</u> |
| 26. Wood Burning | <u>C</u> | 33. Melting Glass | <u>P</u> |
| 27. Freezing of water | <u>P</u> | 34. Adding Na ¹⁺ | |
| 28. Breaking a toothpick | <u>P</u> | to Water | <u>C</u> |

Characteristics	Solids	Liquids	Gases	Plasma
Has a definite shape & volume	X			
Has no definite shape, but has a definite volume		X		
Has no definite shape & no definite volume			X	X
Will take the shape of its container		X	X	X
Particles will expand to fill all available space			X	X
Particles are packed tightly & "locked" in place	X			
Particles are close together, but freely move around		X		
Exists in stars & fire				X
Water at 0 C (Frozen)	X			
Water at 100 C (Boiling/ Vapor)			X	
Water at 50 C (Room Temp.)		X		
Strong Bonds	X			
No Bonds			X	X
Weak Bonds		X		

SEPARATION OF MATTER

Identify/ List/ Explain

How you could separate the following mixtures.

Salt Water: *BOIL - EVAPORATE*

Wood chips/ Sugar/ Gold/ Lead:
USE DENSITIES

Water and Coffee Grounds:
FILTER / STRAIN